MARKETING MINICOMPUTERS FOR

ENGINEERING/SCIENTIFIC APPLICATIONS



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IBM

DATA PROCESSING PRODUCT GROUP

Prepared by: INPUT

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SCOPI	OF PROJECT					
I.	E., DEC, DG, D DETERMINE	BEST EFFORTS, STUDY FIVE COMPANIES, DEC, DG, H-P, PRIME AND PERKIN-ELMER, ETERMINE WHY AND HOW THEY ARE SUCCESSFUL E SMALL ENGINEERING AND SCIENTIFIC MARKET				
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STUDY METHODOLOGY	
DIRECT VENDOR CONTACT	
SECONDARY RESEARCH	
	INPU



RESULT	
DELIVERED IN PRESENTATION FORM TO IBM IN HARRISON ON JULY 14, 1980	
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MARKET

- 1979 WORLD-WIDE SHIPMENTS ESTIMATED AT 138,000
 UNITS WORTH APPROXIMATELY \$3.9 BILLION, INCLUDES
 MAINFRAME, PERIPHERALS, SOFTWARE, SERVICE
 - MARKET SHARE ON FOLLOWING CHARTS SHOWS
 OEM IN UNITS FOR ENTIRE MARKET, END USER IN
 DOLLAR REVENUE FOR ENTIRE MARKET, INTERNATIONAL
 SALES AS A PERCENT OF TOTAL COMPANY REVENUE
 AND UNITS SHIPPED
- 1984 WORLD-WIDE SHIPMENTS ESTIMATED AT 270,000 to 382,000 UNITS WORTH APPROXIMATELY \$16 BILLION
- PROJECT REVENUE TRENDS AND MARKET SEGMENTATION FOR 1979 TO 1984 SHOW 65% OEM/35% END USER WITH REVENUE DECLINING FROM 41% TO 38% FOR OEM AND REVENUE INCREASING FROM 59% TO 62% FOR END USERS

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DIGITAL EQUIPMENT CORPORATION - THE MARKET LEADER

- MARKET SHARE 49% OEM 36% END USER
- INTERNATIONAL SALES 38% REVENUE 28% UNITS
- STRENGTHS
 - FIRST DEVICE IN 1960
 - DOMINANT MARKET SHARE
 - "DARLING OF THE UNIVERSITY SET"
 - DEFACTO STANDARD FOR MINIS
 - DIVERSIFICATION OF MARKETS
 - UPWARD COMPATABILITY
 - MANUFACTURING
 - DISCOUNT STRUCTURE
 - COMMUNICATIONS KNOWLEDGE
 - STRONG CUSTOMER BASE
 - REPUTATION



- WEAKNESSES
 - ORDER LEAD TIME
 - INTERNAL CONFLICTS OF INTEREST DUE TO ORGANIZATION
 - SOFTWARE
 - SOME BEGINNINGS OF LARGE COMPANY ATTITUDE
- MARKET THRUST
 - END USER SALES
 - RETAIL STORE
 - COMMUNICATIONS -- NEW USERS



- MAIN MARKETS AND DISTRIBUTION METHOD
 - DIRECT SALES
 - . UNIVERSITIES AND INSTITUTIONAL LABS
 - . MEDICAL AND HOSPITALS
 - . EDUCATIONAL INSTITUTIONS
 - . GOVERNMENTS
 - . TELEPHONE AND UTILITY
 - OEM SALES
 - . ELECTRONIC TEST EQUIPMENT
 - . PROCESS CONTROL
 - . COMMUNICATION EQUIPMENT
 - . NAVIGATION AND GUIDANCE
 - . MEDICAL APPARATUS



- MAIN MARKETS AND DISTRIBUTION METHOD (CONT.)
 - SYSTEM INTEGRATORS
 - . SCIENTIFIC AND ENGINEERING
 - . COMMERCIAL BUSINESS
 - . INDUSTRY SPECIFIC PACKAGES
 - AUTHORIZED DISTRIBUTORS
 - . BETTER OEM CLIENTS
 - . USE OF LOGO
 - . COOPERATIVE ADVERTISING



- MAIN MARKETS AND DISTRIBUTION METHOD (CONT.)
 - RETAIL STORES
 - . 18 STORES AT 12/31/79
 - . SELL SMALL BUSINESS
 - . STANDARD SOFTWARE ONLY
 - . MODIFIED SOFTWARE REFERRED TO COMMERCIAL OEM OR DISTRIBUTOR
 - CATALOG SALES
 - . 25,000 ITEMS
 - . SPARE PARTS
 - . SUPPLIES
 - . SOME MODULES



HEWLETT PACKARD - ITS OWN WORLD

- MARKET SHARE 7% OEM 17% END USER
- INTERNATIONAL SALES 47% REVENUE 56% UNITS
- STRENGTHS
 - WELL KNOWN IN ENGINEERING CIRCLES DUE TO INSTRUMENT BACKGROUND
 - QUALITY PRODUCT
 - CORPORATE IMAGE
 - RELIABILITY
 - EASE OF PROGRAMMING
 - EASE OF USE
 - DBMS
 - STRONG INTERNATIONAL BASE
 - SIGNIFICANT VERTICAL INTEGRATION
 - GOOD SMALL BUSINESS MACHINE
 - LARGE TERMINAL BUSINESS
 - SERVICE AND MAINTENANCE
 - HEAVY VALUE ADDED
 - CUSTOMER TRAINING
 - STRONG OEM RELATIONSHIPS
 - GOOD SALES PERSONNEL



- WEAKNESSES
 - VERY HIGH PRICE
 - LACK OF UNBUNDLING
 - . FREE SOFTWARE
 - LONG DELIVERY
 - STRONG NIH
- MARKET THRUST
 - END USERS
 - RETAIL FOR PERSONAL COMPUTERS
 - TECHNICAL OEM's

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- MAIN MARKETS AND DISTRIBUTION METHODS
 - DIRECT SALES
 - . MANUFACTURING
 - . SCIENTIFIC
 - . HEALTH CARE
 - . DDP
 - OEM's
 - . LABORATORY AUTOMATION
 - . TIMESHARING
 - . GENERAL SCIENTIFIC AND ENGINEERING



- NEW APPLICATION AREAS
 - CAD
- ADVERTISING
 - LARGE AD BUDGET, GOOD RESULTS
 - USE DIRECT MAIL TO INTRODUCE NEW PRODUCTS
 - USE LOCAL DIRECT MAIL TO STIMULATE SALES
- SALES FORCE
 - + 2,000 SALESMEN
 - TYPICALLY EE, COMPUTER SCIENCE WITH MBA
 - . NEW HIRE MIX 45% EXPERIENCED BUT NOT IN SALES; 27% SALES EXPERIENCE OTHER COMPUTER COMPANIES; 27% DIRECT FROM COLLEGE

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- SALES FORCE (CONT.)
 - COMPENSATION = \$25K BASE PLUS COMMISSION
 TARGETED AT TWO TO THREE TIMES BASE
 - HIGH TURNOVER
 - TRAINING THREE TO TWELVE MONTHS
- MARKET APPROACH
 - NO DIFFERENCE IN MACHINE SIZE
 - ACCOUNT SIZE, OVER ONE BILLION HAVE A
 TECHNICAL AND COMMERCIAL, UNDER ONE BILLION
 HAVE EITHER



- MACHINE OFFERED
 - MODIFIED WITH FEATURES
- ROOTS OF COMPANY SUCCESS
 - REPUTATION AMONGST ENGINEERS BASED ON INSTRUMENTATION AND OTHER PRODUCTS



DATA GENERAL - A DEC "ME TOO" PLUS MARKETING

- MARKET SHARE 15% OEM 7% END USER
- INTERNATIONAL SALES 31% REVENUE 30% UNITS
- STRENGTHS:
 - TOUGH COMPETITOR
 - UPWARD COMPATABILITY
 - BROAD PRODUCT LINE
 - GOOD FINANCIAL CONTROLS
 - EMPHASIS ON TECHNOLOGY
 - OEM DEDICATION



WEAKNESSES:

- LACK OF INNOVATION IN PRODUCTS
- COMMUNICATION PRODUCTS
- UNABLE TO RETAIN BRANCH MANAGERS
- MANY LAWSUITS
- MARKET THRUST:
 - OEM
 - END USER VIA SOFTWARE APPLICATION PACKAGES



- MAIN MARKETS AND DISTRIBUTION METHODS
 - DIRECT SALES
 - . OEM
 - . SYSTEMS INTEGRATORS
 - . GOVERNMENT
 - . SCIENTIFIC
 - . TIMESHARE
 - RETAIL/DEALERS
 - . MICRO LINE
 - . SMALL END LINE
 - INDUSTRIAL DISTRIBUTORS
 - . NO VALUE ADDED



- MAIN MARKETS AND DISTRIBUTION METHODS (CONT.)
 - SYSTEMS INTEGRATORS
 - . BUY ENTIRE PRODUCT FROM DG
 - . COMMERCIAL OUTLET
 - . SOFTWARE VALUE ADDED
 - HARDWARE OEMS
 - . BUY PIECES FROM DG
 - . APPLICATIONS PROCESS CONTROL, DATA COMMUNICATIONS, INSTRUMENTATION, SCIENTIFIC AND TIMESHARE



- NEW APPLICATION AREAS
 - COMPUTER-AIDED DEMOGRAPHICS
 - BRAIN/BODY SCANNERS
 - CAD
- ADVERTISING
 - BROAD BASE MAGAZINE (NOT TRADE JOURNALS)
 - DIRECT MAIL
 - ADS EFFECTIVE IF INCLUDES NEW OFFERING
- SALES FORCE
 - 673 SALES/ENGINEERS
 - COMBINATION BUSINESS AND TECHNICAL
 - NO SPECIFIC CHARACTERISTICS

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MARKET APPROACH

- NO DIFFERENCE FOR LARGE MACHINES VERSUS SMALL
- DIFFERENT MACHINES EMPHASIZED IN SPECIFIC MARKET SEGMENTS

MACHINE OFFERED

- MANY ENGINEERING/SCIENTIFIC USERS WANT COMMERCIAL AS WELL
- "S" SERIES HAS SUBSET OF "C" SERIES FOR COMMERCIAL
- MV8000 HAS FULL INSTRUCTION SET FOR "S" AND "C"

-21-

ROOTS OF COMPANY SUCCESS

- BETTER OEM THAN DEC



PERKIN-ELMER - "INTERDATA SURVIVES IN SPITE OF..."

- MARKET SHARE 2% OEM > 1% END USER
- INTERNATIONAL 45% REVENUE 20% UNITS
- STRENGTHS
 - INDUSTRY FIRST 32 BIT SUPERMINI
 - LARGE INSTALLED BASE
 - GOOD PRICE/PERFORMANCE
 - UPWARD COMPATABLE LINE
 - GOOD EQUIPMENT
 - HIGH RELIABILITY
 - STRONG SPECIFIC OEM FOLLOWING
 - GOOD MARKET NICHE PENETRATION



PERKIN-ELMER - "INTERDATA SURVIVES IN SPITE OF..." (CONT.)

- WEAKNESSES
 - PERKIN-ELMER
 - LACK OF CORPORATE SUPPORT
 - HIGH PERSONNEL TURNOVER
 - LAGGING PRODUCT INTRODUCTION
 - LITTLE USER SOFTWARE OR DBMS
 - WHAT TO SELL AFTER EVERYTHING IN THE WORLD HAS BEEN SIMULATED?
- MARKET THRUST
 - REAL TIME SIMULATION



PERKIN-ELMER - "INTERDATA SURVIVES IN SPITE OF..." (CONT.) MAIN MARKETS AND DISTRIBUTION METHODS DIRECT SALES . OEM . MILITARY . AEROSPACE . NASA . SCIENTIFIC . SIMULATION

- INPUT -



PERKIN-ELMER - "INTERDATA SURVIVES IN SPITE OF..." (CONT.)

- NEW APPLICATIONS
 - IMAGE PROCESSING
 - COMPUTER-AIDED DEMOGRAPHICS
 - CAD/CAM
 - SIESMIC
- ADVERTISING
 - TRADE PUBLICATIONS ONLY
 - NO DIRECT MAIL
 - GOOD HIT RATIO ON ADS
- MARKET APPROACH
 - LARGE MACHINES ARE SOLD ON PERFORMANCE
 - SMALL MACHINES ARE SOLD ON PRICE/PERFORMANCE

- INPUT -



PERKIN-ELMER - "INTERDATA SURVIVES IN SPITE OF..." (CONT.)

- MACHINE OFFERED
 - INSTRUCTION SET FEATURE DIFFERENCES
- ROOTS OF COMPANY SUCCESS
 - BEST PRODUCT AND REPUTATION IN REAL-TIME AND SIMULATION

- INPUT -



PRIME -- "MARKETING CARRIES THE DAY"

- MARKET SHARE > 1% OEM 4% END USER
- INTERNATIONAL SALES 40% REVENUE 45% UNITS
- STRENGTHS:
 - CONTINUING PRODUCT INTRODUCTION
 - AGGRESSIVE, DIRECT SALES FORCE
 - RAPID GROWTH
 - GOOD PROFITS
 - EXCELLENT BUSINESS ORIENTED MANAGEMENT
 - OVERSEAS DISTRIBUTION
 - 40% OF EMPLOYEES ARE IN SALES/MARKETING
 - IMPRESSIVE PENETRATION OF SCIENTIFIC/ ENGINEERING MARKET



WEAKNESSES:

- SMALL INSTALLED BASE
- NO OEM PENETRATION
- 50% INTERACTIVE PROCESSING THAT FALLS IN LINE WITH IBM 4300 AND DEC VAX



- MARKET THRUST
 - GENERAL PURPOSE
 - MARKETING ORIENTED DATA PROCESSING COMPANY
 - "SOFTWARE FIRST"
- MAIN MARKETS AND DISTRIBUTION METHODS
 - DIRECT SALES (ADVANCED AND LARGE USERS)
 - . SCIENTIFIC/ENGINEERING
 - . BUSINESS APPLICATIONS
 - . DDP
 - . DATA ACQUISITION
 - . EDUCATION

– INPUT –



- MAIN MARKETS AND DISTRIBUTION METHODS (CONT.)
 - OVERSEAS DISTRIBUTORS
 - JOINT MARKETING VENTURES
 - . SOFTWARE COMPANIES
 - DEALER PROGRAM
 - . 21 DEALERS AT 12/31/79
 - . EQUIPMENT MAINTAINED BY PRIME FIELD ENGINEERS

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- NEW APPLICATION AREAS
 - MASS TRANSIT
 - CAD
 - PC DESIGN (CAM)
- ADVERTISING
 - TRIED ALL APPROACHES WITH POOR RESULTS
- SALES FORCE
 - 250 SALESMEN
 - NO SPECIFIC DEGREES
- MARKET APPROACH
 - LARGE SYSTEMS SOLD ON PERFORMANCE
 - SMALLER SYSTEMS SOLD ON PRICE/PERFORMANCE



- MACHINE OFFERED
 - FEATURE CHANGES FOR SCIENTIFIC OR COMMERCIAL
- ROOTS OF COMPANY SUCCESS
 - SALES/MARKETING

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STRENGTHS

- SHEER SIZE
- FINANCIAL RESOURCES
- LOYAL MARKET PLACE
- CORPORATE IMAGE
- SYSTEM VERSATILITY
- SERVICE/MAINTENANCE
- S/2 THREAT
- GOOD COME FROM BEHIND COMPANY



IBM (CONT.)

WEAKNESSES:

- LACK OF CORPORATE COMMITMENT TO SOLVE THE MINI PROBLEM
- DON'T LIKE OEM
- DON'T UNDERSTAND OEM
- DON'T WANT OEM
- LACK OF OEM-TYPE SOFTWARE (LIKE DEC/DG)
- SMALL INSTALLED BASE
- OEM PRICING DISCOUNTS
- NOT STATE OF THE ART TECHNOLOGY
- FRACTURED MARKET APPROACH
 - . S/1
 - . 8100
 - . 4300
- NO IMAGE IN SMALL SCIENTIFIC/ENGINEERING
- SALESMAN CAN'T BREATHE OUTSIDE OF THE AIR CONDITIONED ROOM
- DON'T LIKE INNOVATORS



RANKING FACTORS FOR ENGINEERING/SCIENTIFIC

	DEC	DG	H-P	PRIME	PERKIN- ELMER
PRICE/PERFORMANCE	5	5	5	3	5
OS/LANGUAGE	4	4	4	4	4
APPLICATIONS	2	1	1	0	1
SALES FORCE	3	5	4	5	2
SERVICE	4	2	4	1	3
REPUTATION	5	4	5	4	4

NOTE: 5 = HIGH, 1 = LOW

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